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September 10, 2007

Via Hand-Delivery and E-File

Mary L. Cottrell, Secretary Department of Public Utilities One South Station, 2nd Floor Boston, MA 02110

Re: Investigation by the Department of Public Utilities on its own Motion into Rate

Structures that will Promote Efficient Demand Deployment of Demand Resources

D.P.U. 07-50

Dear Ms. Cottrell:

Enclosed for filing, please find an original and 17 copies of the Initial Comments of Wal-Mart Stores East, LP in the above referenced matter.

Please do not hesitate to telephone me with any questions.

Very truly yours,

/s/ Gregory K. Lawrence

Gregory K. Lawrence

GKL/jml Enclosures

cc: Jeanne Voveris, Hearing Officer

Laura Bickel, Hearing Officer

Service list, DPU 07-50

COMMONWEALTH OF MASSACHUSETTS

DEPARTMENT OF PUBLIC UTILITIES

Investigation by The Department of Public	:)	
Utilities on its own Motion into Rate)	D.P.U. 07-50
Structures that will Promote Efficient)	
Deployment of Demand Resources)	

Initial Comments of Wal-Mart Stores East, LP.

On June 22, 2007, The Department of Public Utilities ("Department") issued an order opening an investigation into the rate structures and revenue recovery mechanisms that may reduce disincentives to the efficient deployment of demand resources in Massachusetts, setting August 10, 2007, as the due date for initial comments ("Order"). In the Order, the Department requests comments on its straw proposal that intends to sever the link between utility company revenues and sales and, instead, ties company revenues to the number of customers served, while retaining unit-based energy and demand pricing for customer consumption.

The following persons should be contacted with questions about this filing:

Gregory K. Lawrence Jess P. Galura

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The Department also indicates that it will organize panels for comment during hearings in September 2007. Jess P. Galura, at the contact information above, expresses interest in participating in these panels. Mr. Galura will discuss the subject matter of these initial comments: appropriate rate design as an alternative to the decoupling straw proposal, concluding that rate design that more specifically functionalizes and allocates cost will better

accomplish the Department's goals to encourage energy efficiency, rather than decoupling revenues, which is an imprecise tool and may lead to utility over-recovery of costs with insufficient encouragement of energy efficiency by customers.¹

I. Executive Summary

Wal-Mart East, LP. ("Wal-Mart") supports the Department's overall goals to capture all available economic system and end-use efficiencies and benefits and to foster the advancement of price-responsive demand response in regional wholesale electricity markets. Wal-Mart fully supports the implementation of energy efficiency measures – including customer and utility-sponsored conservation measures, customer demand reductions in response to wholesale market signals, utility-sponsored demand response, and distributed generation. In our comments, we focus on electricity (rather than natural gas) retail rate design and energy efficiency programs.

Wal-Mart has concerns regarding the goal of the straw proposal to decouple utility company revenues and sales. Wal-Mart also is concerned that the straw proposal will have unintended consequences given its: (1) continued focus on consumption, albeit through the proxy of the number of customers in each customer class; (2) potential to protect utilities from common cost variances not related to the implementation of energy efficiency; and (3) additional complexity and challenge to rate stability and existing programs posed by reconciliation filings.

¹ A summary of qualifications is provided as Attachment A.

² For example, Wal-Mart has implemented the following types of measures in certain of its stores: (1) daylighting; (2) electronic dimming ballasts; (3) computer controlled daylight sensors; (4) energy management systems to manage energy usage; (5) all new facilities utilize T-8 fluorescent lamps; (6) new construction uses LED lighting in all internally-illuminated exterior signage; (7) occupancy sensors in non-sales areas of new stores; (8) high efficiency HVAC systems; (9) white membrane roofs are used in most areas of the country; (10) 70% of hot water needs for Supercenters, Sam's Clubs, and Neighborhood Markets are met through a heat reclaim system; and (11) actively dehumidify our buildings allowing them to operate at higher temperatures and use less energy.

Wal-Mart urges and encourages the Department to consider a more straightforward approach to achieve its important energy efficiency goals: adopt a more detailed rate design methodology, rather than an "allowed revenue per customer" approach set forth in the straw proposal.

As discussed in detail below, Wal-Mart suggests the Department modify its rate design to: (1) move from a generalized functionalization method to a more detailed method that identifies and allocates costs more accurately according to customer consumption characteristics and more accurately recover costs from consumers based on their consumption behavior that causes the utility to incur costs; and (2) move to a real-time pricing schedule for energy costs whereby consumers would receive an accurate price signal to form consumption behavior. This method would allocate costs more accurately to the services or functions that the utility provides and would allow customers to receive timely and appropriate price signals – service and energy price signals that will drive consumer energy efficiency decisions -- while allowing utilities to fully recover their costs.

The Department also proposes inclusion of a "shared earnings" provision in the base revenue adjustment mechanism in order to strike an appropriate balance between the risks borne by customers and shareholders associated with company earnings. In order to promote efficient deployment of demand resources, any inclusion of a shared earnings provision should acknowledge consumers such as Wal-Mart that already invest heavily in energy efficiency and demand reduction activities. Energy efficiency rebates, moreover could act as a disincentive for consumers that proactively invest in energy efficiency by reducing that consumer's return on investment. Accepting a small rebate on an energy saving retrofit should not preclude the consumer from also qualifying for capacity payments, or energy payments, or environmental

benefits. If a consumer implements a qualifying energy efficiency retrofit they should be able to receive a rebate (especially since consumers ultimately pay for the rebate program through retail rates) without having to give up capacity payments or other potential payments or benefits. In order for any program that promotes efficient deployment of demand resources to be successful, the program must eliminate disincentives to proactive consumer behavior.

II. Initial Comments and Recommendations

A. Concerns with Decoupling – Other Causes of Revenue Reductions

Wal-Mart's overall concern is that decoupling, as set out in the straw proposal, goes beyond adjustments to account for changes in utility sales directly caused by energy efficiency (e.g., conservation and demand response). Indeed, the proposal might provide utilities special protection from sales lost to competition as well as the normal variances in sales volume due to natural causes such as economic conditions, customers' individual actions, and other circumstances that traditionally have been the utilities' responsibility to manage and therefore not directly related to the utilities promotion of its energy efficiency programs. Wal-Mart's analysis of publicly available data for the Massachusetts electricity market and an examination of the theoretical basis of decoupling mechanisms show that care should be taken to ensure that any implemented decoupling mechanism not become merely a replacement crutch for utilities' reduced revenue caused by retail access or common risks unrelated to energy efficiency.

The traditional impetus for decoupling is to protect the recovery of utility fixed costs from reductions in consumption due to energy efficiency. However, recent data for the Massachusetts retail electricity market shows that consumption is trending upward, not

decreasing (Figure 1.).³ The market has seen an average annual increase of 102 million kilowatthours, which represents approximately 20 megawatts of new capacity needed every year.⁴ While every utility may not be experiencing these gains, the overall retail market is not showing any signs of reductions due to conservation.

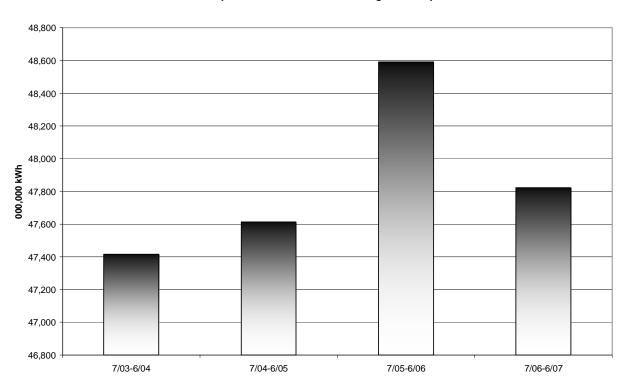


Figure 1: Annual Consumption, All Massachusetts Customers, July 2003 through June 2007 Source: Department of Public Utilities Migration Reports

Reductions to utility sales volumes can be found, however, from sales volume losses due to retail competition. The Department's electric customer migration reports show a 16 percent decrease in the percent of kilowatt-hours sold by Massachusetts incumbents to all customer classes each month from July 2005 to June 2007 (Figure 2.) This is a decrease of almost one

³ Retail data used for all analysis from the Massachusetts Department of Public Utilities Electric Customer Migration Reports. *See* Division of Energy Resources monthly electric customer migration data reports <a href="http://www.mass.gov/?pageID=ocaterminal&L=5&L0=Home&L1=Consumer&L2=Energy%2c+Fuel+%26+Utilities&L3=Electricity&L4=The+Power+Is+Yours%3a+Electricity+Industry+Restructuring&sid=Eoca&b=terminalcontent&f=doer_pub_info_migrate&csid=Eoca.

⁴ Assuming a 65 percent load factor.

billion kilowatt-hours per month for all of the incumbents. For all sizes of commercial and industrial customers, the decrease over the same period is 20 percent, or about 600 million kilowatt-hours per month. In June 2007, competitive suppliers outsold the incumbent utilities for the first time in the history of deregulation in Massachusetts.

80% 70% 60% 50% 40% 30% 20% 10% 0% **A-06** A-05 S-05 N-05 D-05 90-F-06 90-W 9-09 9-6 4-06 F-07 4-07 J-07 Inc. % of C&I kWh ☐Inc % of Tot kWh

Figure 2. Percent kWh Sold by Incumbent Utility to C&I Customers and Total Customers, All Massachusetts Incumbents, July 2005 through June 2007.

Source: Department of Public Utilities Migration Reports

These decreases in energy sales volumes translate into revenue losses of approximately \$100 million *per month* for the incumbent utilities when compared to sales volumes just two years ago.

While incumbent utility energy sales are declining, retail competition has had far less impact on the incumbents' generation service customer counts, especially for customer classes other than commercial and industrial. As of June, 2007, Massachusetts incumbents were serving 87 percent of generation service customers, down from 91 percent in July, 2005. For the same

time period, the portion of all sizes of commercial and industrial customers served by incumbents dropped from 86 percent to 77 percent. Though the utilities have experienced a decline in percentage terms, as a whole the incumbents' generation service customer counts have remained relatively flat over the study period, as there has been an increase in the total number of electric service customers in Massachusetts.

For the purposes of any potential decoupling mechanism, however, all customers are essentially utility customers because they continue to take monopoly distribution and transmission functions regardless of power supplier. For the purposes of any potential decoupling mechanism, using annual consumption figures for July 2003 through June 2007, the incumbents should not have realized reduction in distribution revenues.

One potential consequence of implementing decoupling as proposed in the competitive Massachusetts market is that customers could be negatively impacted because the incumbent utility has not competed successfully with retail suppliers. From a utility's perspective, revenue associated with energy or distribution is of equal importance. Any mechanism adopted by the Department should ensure that the lost revenues from reduced energy sales do not creep into the requested revenues from the distribution side. At present, incumbent revenue losses due to sales reductions appear tied to competitive retail migration, not distribution losses or losses due to energy efficiency implementation.

Ascertaining the full impact of energy efficiency programs on a utility's sales volume is easier said than done. Competition is not the only variable in the energy consumption equation.

Weather variations – rather than energy efficiency – can wreak havoc to utilities' sales forecasts. If the decoupling mechanism is not normalized by the effect of weather variations, customers will, again, receive a conflicting message from the utility. Similarly, a downward trending

economy can significantly change usage patterns (generally, also downward) in a manner completely unrelated to the actual, deployed energy efficiency measures. The straw proposal likely would raise rates to compensate the utility for this apparent usage reduction, further raising the burden for consumers who consciously try to conserve proactively on their own. Similarly, utilities should not be reimbursed through a decoupling mechanism for apparent losses in sales due to power outages and force majuere events under the presumption of reduced sales caused by energy efficiency. There are other examples Wal-Mart could provide during the public hearings and panel discussions.

Allowing rates to be adjusted upwards (or downwards) when the utility does not produce its authorized revenue requirement to cover its fixed cost due to lower sales volumes than originally expected (sale volume used in the design of the rates) seems to reward utilities beyond simply compensation for reduction in sales volume directly resulting from the successful promotion of energy efficiency. Many other variables that are considered part of the risk of doing business may have a more significant impact on the utilities sales volume than the impact of energy efficiency programs. The Department should exercise care to account for these natural causes for sales volume variances before allowing rates to be adjusted through the application of a decoupling methodology. Only a decoupling mechanism that properly accounts for the effect of these variables can be declared to be just, reasonable and nondiscriminatory.

Wal-Mart also is concerned with the disconnect between how revenues for the reconciliation period would be determined and billed to customers. Traditional ratemaking suggests that costs associated with a customer's presence on the system are billed at a fixed amount because such costs do not change with the customer's consumption. While costs reflecting a customer's size can vary, once set they should not vary or change from month to

month. Because decoupling addresses fixed costs, it is inappropriate to then recover these fixed costs via an energy-related charge.

Wal-Mart applauds the Department's efforts to promote energy efficiency through decoupling. Increasing retail rates automatically or through a reconciliation filing to allow utilities to recover an allowed rate of return given energy efficiency-caused consumption reductions, however should be carefully considered to send the appropriate message to consumers. If decoupling is not fully evaluated, a consumer who manages its energy costs by diligent conservation or demand response could end up with a higher retail rate, and potentially a higher bill, as a reward. Ultimately, improper application of decoupling could blunt most customers' primary incentive to conserve, which is the opportunity to save money.

B. Another Approach: Rate Design Reforms

Ratemaking is a three step process of functionalization and classification of costs, allocating these costs to designated customer classes (based on cost-causation principles), and designing rates to collect the costs allocated to each customer class. Although the process is seemingly a simple procedure, each customer class has its own view of what constitutes an appropriate allocation given cost causation and public policy goals. Rate design determines how to collect these costs from each customer class generally based on a flat monthly customer charge, per kilowatt of demand charge, and a per kilowatt-hour charge.

The straw proposal decoupling mechanism allows utilities to collect the revenues they were authorized to collect from customers, regardless of their sales volumes as applied to the volumetric charges. Wal-Mart urges the Department to consider a modification to rate design.

Utilities generally use at least three major functions for rate design, namely, Generation, Transmission, and Distribution functions and within each of these functions, costs are classified

into Demand-related (or fixed cost), Energy-related (or variable cost), and Customer-related (or cost necessary to connect customers to the electrical system and to take care of customers). The classification of cost is based on the principle that certain consumption characteristics of the customer cause the utility to incur an expense. The appropriate classification of costs is also important because it leads to a more straightforward method of allocating cost to the appropriate customer class.

1. Generation Function

In the generation function, cost is classified into demand related (fixed cost), and energy related cost (variable cost), and no cost is classified as customer related. Once generation costs are appropriately classified, it is then allocated to each of the customer classes. Demand related costs are allocated to each customer class based on the class' contribution to the system peak of the electrical system at the generation level with demand charges often set based on the customers' highest monthly billing demand. This system is not reliant on interval meters. With the advent of electronic interval meters, utilities can now more precisely determine each customer's contribution to the monthly system peak. Therefore, Wal-Mart suggests the following improvements to rate design for the generation function that will further the Department's goals to encourage energy efficiency:

- Develop a demand charge that is based on the kW of customers' contribution to the utilities' system peak which will more accurately reflect the cause and effect of the customers' consumption characteristic which causes the utility to incur cost for capacity at the generation level.
- Adopt dynamic pricing or real-time-pricing for the variable or energy related costs or, at a minimum, time differentiated rate schedules for all customer classes, which reflect the true hourly cost of their generation and wholesale purchased power cost in order to send the appropriate price signal to their customers and give them the opportunity to manage their energy bill thereby encourage the implementation of energy efficiency measures by customers.

2. Transmission Function

The transmission function is usually comprised of facilities needed to connect the utilities generating resources to form a power grid, to deliver large amounts of power to major load or population centers (bulk transmission system), and facilities needed for system reliability (redundancies). The construction of transmission facilities depends mainly on the level of cumulative power that the customers need, the size of the area that the utility serves, and the level of reliability that customers demand to ensure that power is there when required by the customer. The transmission system of a utility does not change because customers are using energy twenty-four hours a day or based on how many customers are connected to the system but rather based on the cumulative power that the customers need at the transmission level, at any time of the day. This load is called the system coincident peak. Therefore, transmission related cost is considered 100% demand related or fixed cost because it does not change based on customers' energy use or on how many customers are being served by the utility.

Utilities often allocate transmission related cost to each customer class based on each class' contribution to the system peak at the transmission voltage level. The rate to collect these costs are designed based on the highest monthly kilowatt load of each customer of the utility and not based on the load that caused the utility to incur transmission cost. Wal-Mart suggests the following improvements to the allocation of cost and design of rates for the transmission function to achieve the Department's goals:

- In order to better allocate the cost to the customers who are responsible for the incurrence of the cost, the transmission system should be divided into two sub-functions: (1) bulk power transmission system and (2) transmission lines that are designed to deliver the power to each of the systems' load or population centers including the redundancies that are built into the system to take care of reliability.
- The costs assigned to the bulk power transmission system should then be allocated to customers based on the customers' contribution to the transmission level system peak,

- while the second sub-function "area transmission" -- should be allocated to each customer's contribution to each of the area's highest 12 monthly peak (or area peak load).
- In order to collect the costs from the bulk power transmission system, the rate should be designed based on a \$/kW charge, where the kilowatt used is each of the customer's contribution to the transmission voltage level system peak and the area transmission charge will be based on the customer's contribution to the area's peak load⁵.

3. Distribution Function

The remaining cost of the system is designated as belonging to the distribution function. The distribution function starts at the point where power is transformed at various load centers to be distributed to distribution substations through the primary and secondary distribution systems and up to the point where customers are connected to the electrical distribution system and to the point where customers' use of power is metered by the utility. Within the distribution system, there are differing cost drivers that need to be considered in order to be able to appropriately assign cost responsibility to each customer class. Utilities differ greatly on how they handle the functionalization or sub-functionalization and the classification of cost at this stage. The facilities and cost associated with this function are accounted for under accounts 360 thru 373 in the Uniform System of Accounts used by utilities. These various accounts correspond to the primary distribution sub-function or the secondary distribution sub-function of the entire distribution system of the utility. These sub-functionalized costs are then classified into customer related, and demand related cost. Similar to the transmission function, there are no costs in the distribution sub-function that are considered to be driven by the energy consumption of customers.

⁵ With the widespread use of Smart Metering technology or electronic interval metering systems this information can now be easily determined by the utility.

Wal-Mart recommends:

- In order to better allocate distribution cost to the customers who are responsible for the incurrence of such cost, the distribution system should be divided into three subfunctions: (1) primary distribution system, (2) secondary distribution sub-function; and (3) directly-assigned customer facilities.
- The costs assigned to the primary distribution system are then allocated to customers based on each customer's contribution to the area system peak (collected on a \$kW charge), while the secondary distribution sub-function should be allocated to each customer class based on the class' non-coincident load or the aggregate of the customers' highest demand each month (charge to each customer based on these highest monthly peak demand on a \$/kW basis)
- Any part of the power system that is dedicated to the sole use of an individual customer (which may include the transformer, the secondary line, service drop and metering system) should be charged to that customer on a fixed \$/month charge to collect the costs of those dedicated facilities over the estimated service lives of such facilities. Customers should be given the opportunity to provide these facilities themselves if they do not desire to pay the fixed monthly charge, to connect and take service from the electrical system.

III. Conclusion

Wal-Mart's proposed rate design method will provide the utilities with a steady revenue stream. The proposal also will provide rate stability, rate continuity and administrative efficiency avoiding new reconciliation procedures that can be burdensome and expensive for reoccurring rate reviews to all utility stakeholders. The utility revenue levels and customer rate levels are adjusted through subsequent base revenue proceedings only and do not transfer the risk of doing business from the utility to consumers. At the same time, the proposal provides a predictable and transparent price signal to consumers, which motivates energy efficiency, and should lead to stable long-term price level to consumers.

Wal-Mart looks forward to the opportunity to discuss its rate design approach with the Department and other participants in this proceeding.

Respectfully submitted,

/s/ Gregory K. Lawrence

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Attorney for Wal-Mart Stores East, L.P.

Dated: September 10, 2007

ATTACHMENT A

STATEMENT OF QUALIFICATIONS FOR JESS P. GALURA

Presently, the Senior Manager, Energy Regulatory Analysis for Wal-Mart Stores, Inc., responsible for managing our involvement in regulatory proceedings around the country and determining the potential impact of these proceedings to our stores. Mr. Galura is an electrical engineer with over thirty years of work experience in the regulatory areas involving cost-of-service and rate design.

Manager, Transmissions for Intergen Services, Inc., in charge of negotiating interconnection agreements with transmission service providers.

Director in the Contract Risk Management and the Rates and Tariffs groups of Enron Energy Services, Inc., managing the energy needs of large commercial and industrial customers of EES.

Manager of Rates at Sacramento Municipal Utility District in charge of managing and implementing all aspect of the rate making process for the District.

Supervisor of Regulatory Cost at Pacific Gas and Electric Company in charge of performing cost of service studies and serving as the expert witness in the areas of cost-of-service and rate design at the California Public Utilities Commission and the Federal Energy Regulatory Commission.

Various positions involving cost of service and rate design at Southern California Edison Company, Tennessee Valley Authority, Papua New Guinea Electricity Commission, and the Manila Electric Company.